

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>05511193WO01</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/JP2005/020397</b>	International filing date (day/month/year) <b>01/11/2005</b>	(Earliest) Priority Date (day/month/year) <b>10/11/2004</b>
Applicant  <b>CANON KABUSHIKI KAISHA</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☐ the text is approved as submitted by the applicant
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 2
- ☒ as suggested by the applicant
- ☐ as selected by this Authority, because the applicant failed to suggest a figure
- ☐ as selected by this Authority, because this figure better characterizes the invention
- b. ☐ none of the figures is to be published with the abstract

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/020397

### Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A recording head including outlets (100a,100b) disposed in a staggered pattern so that the distances from an ink inlet (500) to the outlets differ alternately for adjacent outlets. A recording head includes an outlet group including a plurality of outlets on at least one side of an ink inlet. The outlet group includes first outlets (100a) and second outlets (100b), wherein the distance from the ink inlet to the first outlets differs from the distance from the ink inlet to the second outlets. First recording elements (400a) and second recording elements (400b) including heat resistors are provided. The first recording elements and second recording elements correspond to the first outlets and the second outlets, respectively, and are disposed in first ink channels and second ink channels, respectively. The first recording elements are rectangular, whereas the second recording elements are substantially square.

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/JP2005/020397

## A. CLASSIFICATION OF SUBJECT MATTER B41J2/14

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
B41J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 308 284 A (HEWLETT-PACKARD COMPANY) 7 May 2003 (2003-05-07) paragraphs '0050! - '0056!; figures 7,8	1-8
A	EP 0 691 204 A (HEWLETT-PACKARD COMPANY) 10 January 1996 (1996-01-10) abstract; figure 7	1-8
A	US 2003/117462 A1 (CLELAND TODD A ET AL) 26 June 2003 (2003-06-26) paragraph '0043!; figure 5	1-8



Further documents are listed in the continuation of Box C.



See patent family annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

22 February 2006

Date of mailing of the international search report

02/03/2006

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/JP2005/020397

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 1308284	A	07-05-2003	JP	2003145771 A	21-05-2003
			US	2003081027 A1	01-05-2003
EP 0691204	A	10-01-1996	DE	69501801 D1	23-04-1998
			DE	69501801 T2	09-07-1998
			HK	1011956 A1	28-04-2000
			JP	8039803 A	13-02-1996
			US	5519423 A	21-05-1996
US 2003117462	A1	26-06-2003	US	6491377 B1	10-12-2002